

*If you are using a printed copy of this procedure, and not the on-screen version, then you **MUST** make sure the dates at the bottom of the printed copy and the on-screen version match.
The on-screen version of the Collider-Accelerator Department Procedure is the Official Version.
Hard copies of all signed, official, C-A Operating Procedures are kept on file in the C-A ESHQ Training Office, Bldg. 911A.*

C-A OPERATIONS PROCEDURES MANUAL

ATTACHMENT

4.56.ad MUON Storage Ring Sweep Checklist

C-A-OPM Procedures in which this Attachment is used.		
4.56		

Hand Processed Changes

<u>HPC No.</u>	<u>Date</u>	<u>Page Nos.</u>	<u>Initials</u>
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Approved: _____
 Collider-Accelerator Department Chairman Date

P. Ingrassia

MUON Storage Ring Sweep Checklist

Team leader _____ Operator 2 _____

Operator 3 _____

Time: _____ Date: _____

Warning:

ONCE A SWEEP IS COMPLETE, ANY WORKER LEFT IN THE ENCLOSURE MUST HAVE A CA(EB003) KEY.

IF any personnel are encountered during the sweep, **THEN** determine whether their work will be completed in a short time. **IF** the work will take a long time, **THEN** contact the OC to see if the sweep should be aborted or the workers asked to leave to obtain a CA(EB003) key. **IF** the work will be completed in a SHORT time, **THEN** write the name(s) of the workers at the end of the checklist and verify that they leave the enclosure **WITH** the sweep team.

Prerequisites

- Operators shall carry no FERROUS objects on their persons when sweeping the Muon Storage Ring. **NOTE: BANK/CREDIT CARDS MAY BE ERASED WHEN THE RING IS ENERGIZED**
- Three persons to perform the sweep,
- Muon Storage Ring Sweep Checklist for C-A-OPM-ATT 4.56.ad (two sheets)
- Required Tools: at least one flashlight,
- TLD
- Walkie-talkie
- Padlock for Crane Cab ladder
- Keys: Controlled Access (EB003) and Sweep/Reset (EB002) keys

Note:

All Doors Building Must Be Closed Before The Sweep Is Begun.

check

- ____ 1. Team Leader contacts MCR to verify that Muon Ring area is on Controlled Access.
- ____ 2. Sweep Team goes to Building 919 Control Room Gate (MGE1).

Note:

Operator in MCR must hold MGE1 PanelView gate release button until told by Team Leader to release the button.

- ____ 3. Team Leader requests simultaneous release from MCR.
- ____ 4. Team leader opens MGE1 gate by turning the CA(EB003) key in the OPEN key-switch while Operator in MCR presses simultaneous release.

CONTINUED ON REVERSE SIDE

- ___ 5. Sweep Team enters MGE1 gate and closes the door behind them.
- ___ 6. Team Leader radios MCR operator to report when MGE1 is closed.
- ___ 7. Operators proceed to the stairs leading down to the center of the ring.
- ___ 8. Team Leader gives this checklist AND S/R(EB002) key to Operator #2.
- ___ 9. Team Leader stands static watch on platform above magnet while Operators #2 & #3 go down onto floor to begin sweep of the area at the center of the magnet.
- ___ 10. Operators #2 & #3 proceed to the reset-station located on the equipment rack in the center of the ring.
- ___ 11. Operator # 2 resets reset-station #1 by inserting and turning the S/R(EB002) key in the SWEEP key-switch.
- ___ 12. Observe the AREA SECURED amber lamp light for 2 seconds.
- ___ 13. Operators #2 & #3 sweep out from the center of the ring, IN OPPOSITE (CW & CCW) DIRECTIONS, and rejoin Team Leader at the top of the stairs.
- ___ 14. Sweep Team proceeds to the stairs next to MGE1 that lead to the outside of the Storage Ring.
- ___ 15. Team Leader instructs Operator #2 (with S/R#2 key, this checklist, and padlock) to sweep CW around the ring, to stop at barrier created by the V1 line and wait there for Operator #3.
- ___ 16. Team Leader instructs Operator #3 to sweep CCW around the ring, and meet Operator #2 at the "MED12 side" of the V1 line (beam left).
- ___ 17. Team Leader stands static watch atop the platform at the stairs leading down to the outside of the Muon Storage Ring.
- ___ 18. Operator #2 proceeds CW around the ring to space under the stairs (UNDER MGE1).
- ___ 19. Operator #2 resets reset-station #2 by turning the S/R(EB002) key in the SWEEP key switch.
- ___ 20. Observe the AREA SECURED amber lamp light for 2 seconds.
- ___ 21. Operator #2 sweeps CW around the ring until the Crane Cab Ladder is reached.
- ___ 22. IF the barrier to the Crane Cab ladder is padlocked, THEN continue, ELSE padlock it.
- ___ 23. Operator #2 sweeps CW around the ring, to the V1 Line and stops when Operator #3 is reached.
- ___ 24. Operator #2 gives the S/R(EB002) key and this checklist to Operator #3.
- ___ 25. Operator # 2 walks completely around the ring in the CW direction and stands static watch at the inflector.
- ___ 26. Operator #2 stands Static watch at the inflector until Operator #3 resets MED12, then returns (CW direction) to the stairs leading to MGE1 and awaits Operator #3.
- ___ 27. Operator #3 sweeps up the ladder onto the Cryogenic platform.
- ___ 28. Operator #3 checks that door (MED12) is closed and locked.
- ___ 29. Operator #3 resets reset-station #3 by turning the S/R(EB002) key in the SWEEP key switch.
- ___ 30. Observe the AREA SECURED amber lamp light for 2 seconds.
- ___ 31. Operator #3 resets MED12 (southwest escape) door by turning the S/R(EB002) key in the RESET key-switch.
- ___ 32. Observe the GATE RESET amber lamp light, If the gate was not previously reset.
- ___ 33. Operator #3 sweeps down the ladder and proceeds CW around the ring away from the inflector where Operator 2 is standing static watch.
- ___ 34. Sweep team reverses sweep direction and retraces their steps, Operator # 3 (with S/ (EB002) key and this checklist) sweeps CW and Operator #2 sweeps CCW.
- ___ 35. Operator #3 sweeps to roll up door and gate MED3.
- ___ 36. Operator #3 checks that door (MED3) and adjacent roll-up door are closed and locked.

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- ___ 37. Operator #3 ends the sweep by turning the S/R(EB002) key in the SWEEP key switch on the Gate Box next to MED3.
- ___ 38. Operator #3 resets MED3 door by turning the S/R (EB002) key in the RESET key-switch.
- ___ 39. Observe the GATE RESET amber lamp light on the gate box if the gate was not previously reset.
- ___ 40. Observe the AREA SECURED amber light will remain lit.
- ___ 41. Operator #3 sweeps towards the stairs at MGE1.
- ___ 42. Operator #3 and Operator #2 meet at bottom of stairs to MGE1, and proceed up the stairs to rejoin Team Leader.
- ___ 43. Sweep Team Sweeps to inside of MGE1.
- ___ 44. Team Leader requests a simultaneous release from MCR.

Note:

Operator in MCR must hold MGE1 PanelView gate release button until told by Team Leader to release button.

- ___ 45. Sweep Team sweeps out the MGE1 gate.
- ___ 46. Team Leader radios MCR operator to report when MGE1 is closed.
- ___ 47. Observe the area secured light will be lit and remains on.

Note:

Since MGE1 is a Remote Controlled Access Gate, it can only be reset from the MCR PanelView

- ___ 48. Team Leader verifies with operator in MCR that the zone is swept and that two (MED3, MED12) gates are reset.
- ___ 49. Contact HP to reinstall "Radiation Area" rope posting on Ramp/Driveway to Building 919.
- ___ 50. Sweep Team (at conclusion of all sweeps) returns to MCR.
- ___ 51. Capture CA (EB003) and S/R (EB002) keys in the key tree.
- ___ 52. Reset gate MGE1 in MCR.
- ___ 53. Confirm gate MGE1 is reset using PanelView.
- ___ 54. Team Leader files completed checklist in Completed Sweep Checklist Binder.